

10. NOTE ON THE SEASONAL PREVALENCE OF  
*CULICOIDES SCHULTZEI* (ENDERLEIN): SYNONYM  
*CULICOIDES OXYSTOMA* KIEFFER (CERATOPOGONIDAE :  
 DIPTERA)

(With a plate)

The biting midge, *Culicoides schultzei*, is common all over India (Sen & Dasgupta 1959). It has been collected in large numbers in Rajasthan, Poona, and S. India (unpublished data, VRC). Species of *Culicoides* are regarded as vectors of African Horse Sickness in S. Africa. Though not definitely implicated in the spread of African Horse Sickness in India in 1960, *C. schultzei* was the principal suspect. This was because it was shown to feed on horses, and was widely distributed and abundant. It seemed worthwhile, therefore, to keep track of its seasonal prevalence.

The observations reported here were made at a village five miles east of Vellore, North Arcot District, Madras State. The population of the village was about 600, and the main crops were paddy and sugarcane. There were several wells with electric pumps in the area and it was possible to have three crops of paddy a year.

#### METHOD

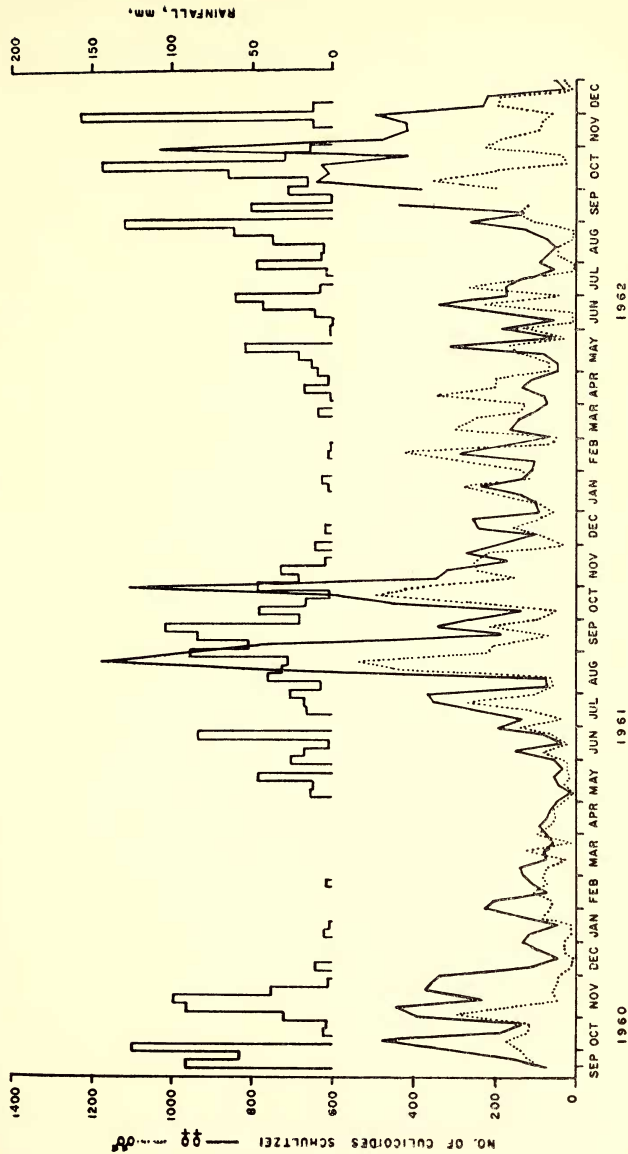
*Culicoides* were trapped on sticky traps made by stretching brown paper on embroidery frames, 10 in. in diameter, and smearing both sides with castor oil. Two frames were hung in each of five cattle-sheds. Insects, principally *Culicoides*, were trapped on the castor oil. The brown papers were examined and changed twice a week.

#### RESULTS

*C. schultzei* was the only species of *Culicoides* taken in large numbers on the sticky traps. *C. orientalis* and *C. peregrinus* were occasionally taken. *C. anophelis*, though often found attached to the abdomens of mosquitoes caught in the same area, did not appear in sticky trap collections.

The Figure shows the number of *C. schultzei* taken on the traps every week from 14 September 1960 to 2 January 1963 together with rainfall data for the same village. Twelve year averages of maximum and minimum temperatures at Vellore are given in the Table on p. 309. *Culicoides* collections were high during the rains from about August to November and low for the rest of the year.

Usually females were more abundant in the catches than males. Of the 17,796 females of *C. schultzei* collected in the first 81 weeks 23·8% were unfed, 72·5% were freshly gorged with blood, and 3·7% were gravid.



Weekly catch of *Culicoides schultzei* at, and rainfall data for, a village five miles east of Vellore, North Arcot District, Madras State